Green Line Extension RFR Attachment *Scope of Work*

Green Line Extension Survey Base Mapping

EOT Planning has engaged a survey contractor to perform the following scope of work. It is anticipated that the survey will be completed when the DEIR Consultant begins work in July. The survey base mapping effort consists of the development of survey base mapping of existing conditions on the 4.4-mile Green Line Extension corridor including right-of-way, property line, and existing utility information.

The Survey Contractor is conducting the following survey:

1. Right-of-Way

The Survey Contractor will research the existing Right-of-Way to obtain copies of Railroad Valuation Maps, local assessor maps and critical record survey plans. The right-of-way will be researched sufficiently to determine its location graphically on the base plans. Critical areas warranting a field survey will be noted.

2. Control Survey

The Survey Contractor will establish survey control along the entire length of the project. The control will be used for several efforts including, the location of the photo control, right-of way, utilities, etc. The control survey will be performed through a combined method of surveying utilizing Global Positioning Systems (GPS) and Electronic Total Stations. The control will be tied horizontally and vertically into the project Datum.

Ground Control: The Survey Contractor will field locate horizontal and vertical ground control as required by the aerial mapping firm to properly produce the mapping for the project. The control will be reduced and calculated to the known datum. The Survey Contractor will prepare control sheets to be transmitted to the aerial mapping firm for the mapping phase of the project.

Aerial Mapping: The Survey Contractor will coordinate with the aerial mapping survey subcontractor to fly the corridor and produce the base mapping of the corridor. The width of the mapping corridor will be a minimum of 300 ft. centered with the existing railroad bed. At sixteen (16) overhead and three (3) undergrade bridges the mapping areas jog out to incorporate the approach roadways and adjacent intersections. The mapping will be produced electronically and suitable for 40 scale. Contours will be shown at one foot intervals.

3. Supplemental Ground Survey

The Survey Contractor will perform the following ground survey to supplement the aerial mapping as necessary for this phase of the design:

Topographic Survey: Locations and elevations will be obtained in areas that are obscured in the aerial photographs. These locations and elevations will be added to the Base Plan.

Utility Survey: The Survey Contractor will perform research at the appropriate utility agencies serving the area to determine the locations of underground utility lines along or crossing the Right-of-Way. Utility lines shown on the record plans will be shown on the Base Plan.

Field Check: Field-verify existing conditions of base mapping for the 4.4 miles of Right of Way. Supplemental field survey will be identified in areas that have been altered and need to be updated to insure the existing conditions are current.

4. Bridge Survey

The Survey Contractor will perform detailed bridge survey at sixteen (16) overhead bridge locations. The Survey Contractor will also perform survey at three (3) undergrade bridge locations. The survey will include field measurements to show specific bridge structure elements as needed by the structural engineers for a bridge design type study and will conform to the requirements outlined in the MHD Bridge Manual, Section 1.1. – Survey for Bridges. All survey will be in English units.

Deliverables: 1) Base survey mapping for the corridor, 2) Bridge surveys on 16 overhead and 3 undergrade bridges.